

### RF Surge Protector for High Altitude Electromagnetic Pulse (HEMP) and other Electromagnetic Pulse (EMP) Protection Applications

COTS products that meet MIL-STD 188-125-1, MIL-STD 188-125-2, & MIL-STD-461 standards.  
 Custom versions are available, please contact NexTek or local representative.

- ☑ High-Speed Protection Designs
- ☑ Type N, TNC, SMA
- ☑ Ultra-Low Let-Through Energy
- ☑ Bands from DC to 18GHz
- ☑ Meet MIL-STD Requirements for EMP
- ☑ Tested and Verified Designs



### Transient Specifications

MIL-STDs 188-125-1 and 188-125-2	E1 (20x500nsec) - Input Current Levels	5000A
	Peak Response Current Residuals (20x500nsec)	<1A (Levels 1, 2, 3 & 4) & <0.1A*
	Peak Rate of Rise 20x500nsec (A/s)	<1x10 <sup>7</sup>
	Root Action 20x500nsec ((A-(sec) <sup>1/2</sup> )	1.6x10 <sup>-3</sup>
MIL-STD 461	CS115 & CS116 (1MHz, 30MHz, 100MHz) Residuals	<25V*
IEC 61000-4-5	Max Surge Current (8x20µs)	100A – 60kA*
	Protection (Let-Thru) Voltage (8x20µs) @ 3kA	<5V*

\* Varies by model

### RF Bands and Performance

Frequency Identifier	Frequency Range	Max VSWR	Max IL
BB	DC-100MHz	1.5	0.5
BC	1MHz -50MHz	1.1	0.1
BD	30-150MHz	1.2	0.2
BE (Dual Band)	50MHz-100MHz	1.1	0.1
	820MHz-2.2GHz	1.2	0.2
BF	2.2GHz-7.6GHz	1.2	0.2
BG	5.2GHz-18GHz	1.3	0.2

### Additional Specifications

<b>DC Voltage Options (@ 2Amp):</b>	6, 12, 24
<b>RF Power Ranges:</b>	20dBm - 1kW*

\* Varies by model

Environmental	
<b>Temperature Range</b>	-50°C to +85°C
<b>Salt Fog</b>	MIL-STD-202 Method 101D / Condition B (35°C/96 hrs)*
<b>Immersion</b>	MIL-STD-202 Method 104A / Condition A (65°C to 25°C w/NaCl – 2 cycles)
<b>Moisture Resistance</b>	MIL-STD-202 Method 106E (65 °C/98% RH condensing/240 hrs)
<b>Temperature Shock</b>	MIL-STD-202 Method 107D / Condition B-1 (25 cycles -55°C to +100°C)
<b>Life (Elevated Temperature)</b>	MIL-STD-202 Method 108A / Condition A (96 hours at 85°C)
<b>Dust and Waterproof Rating</b>	IEC529 IP68 (dust-tight and water proof 24 hrs / 1 m)
<b>Vibration</b>	MIL-STD-202 Method 204D / Condition D (10Hz-2kHz 0.06" DA/20g)
<b>Mechanical Shock</b>	MIL-STD-202 Method 213 / Condition A (50g/11ms ~24")

\* Varies by model

### Package Options (See Drawings on Pages 3-4)

	-A	-B	-C	-D	-E
<b>Body Material</b>	Aluminum	Aluminum	Aluminum	Brass	Brass
<b>Body Finish</b>	Nickel	Nickel	Nickel	Nickel	Nickel
<b>Connector Material</b>	Stainless steel	Brass	Stainless steel	Brass	Brass
<b>Connector Finish</b>	Nickel	Nickel	Nickel	Nickel	Nickel
<b>Center Pin Material</b>	BeCu	BeCu	BeCu	BeCu	BeCu
<b>Center Pin Finish</b>	Gold	Gold	Gold	Gold	Gold
<b>Watertight</b>	IP68	IP68	IP68	IP68	IP68

### Part Number Configuration

Series	Type	Surge Conn	Surge Gender	Protected Con	Protected Gender	Freq	Polarity	Voltage	Package
FP	H	S	F	S	F	BC	P	24	-E

**Connector Types: S – SMA, N – Type N, T – TNC**

**Connector Genders: F – Female, M – Male**

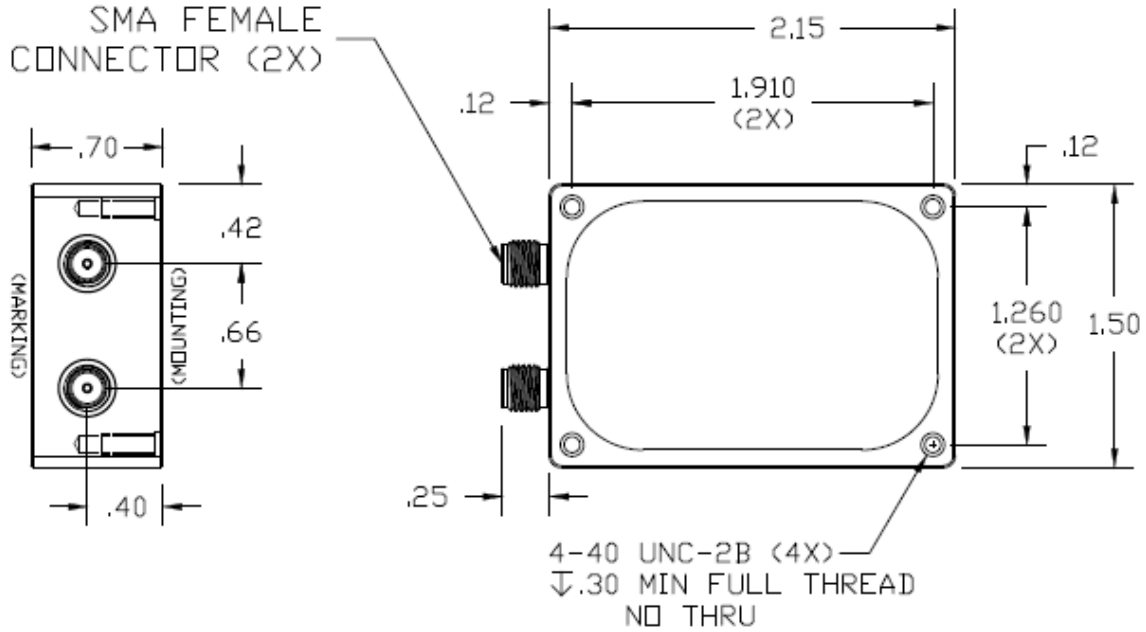
**DC Polarity (for DC Pass only): P – Positive (+), N – Negative (-)**

### Example Part Numbers

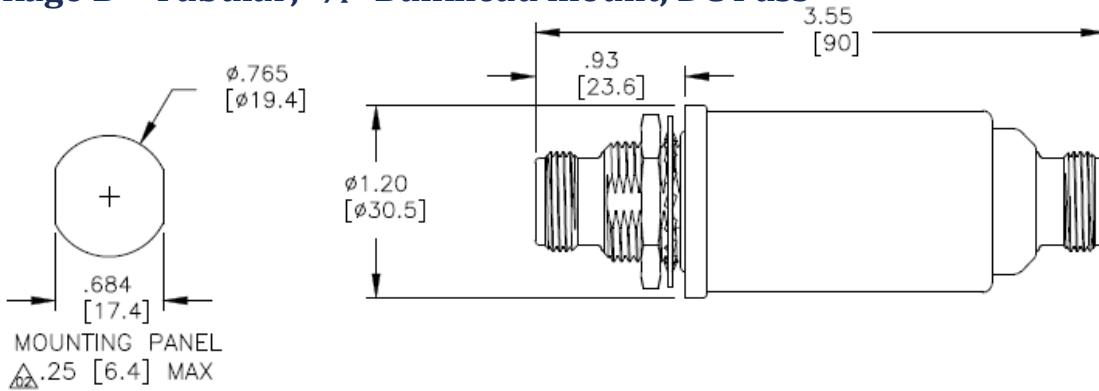
Model Number	Frequency Range, MHz	Max VSWR	MAX IL	DC Pass
FPHSFSFBCP12-B	1 – 50	1.2	0.2	Yes
FPHSFSFBEP24-A	50-100, 900-2200	1.2	0.2	Yes
FPHTFTFBF000-D	2200-7600	1.2	0.2	No
FPHNFNFBBP06-B	DC-100	1.1	0.1	Yes
FPHNFNFBF000-D	2200-7600	1.2	0.2	No
FPHNFNFBG000-E	5200-18000	1.3	0.3	No

### Package Drawings

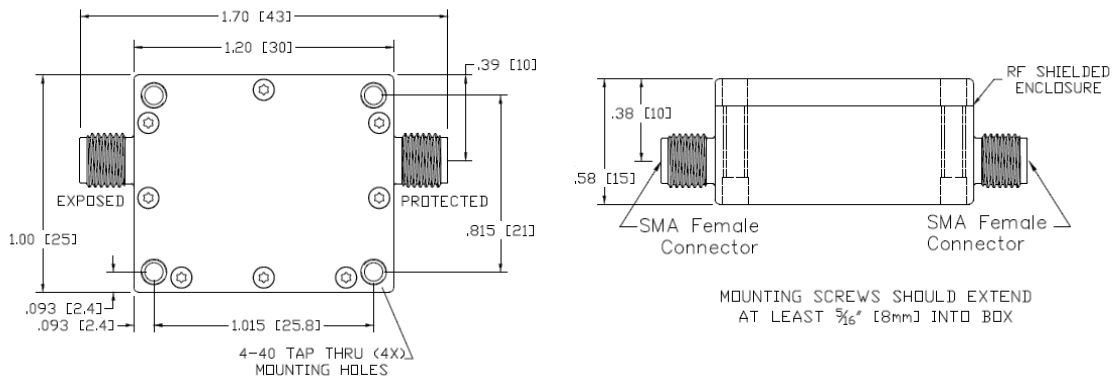
#### Package A - Small Box, DC Pass



#### Package B - Tubular, 3/4" Bulkhead mount, DC Pass

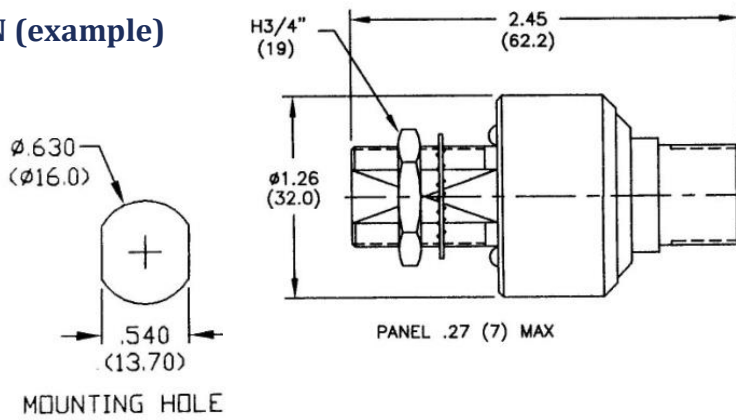


#### Package C - Small box, no DC Pass

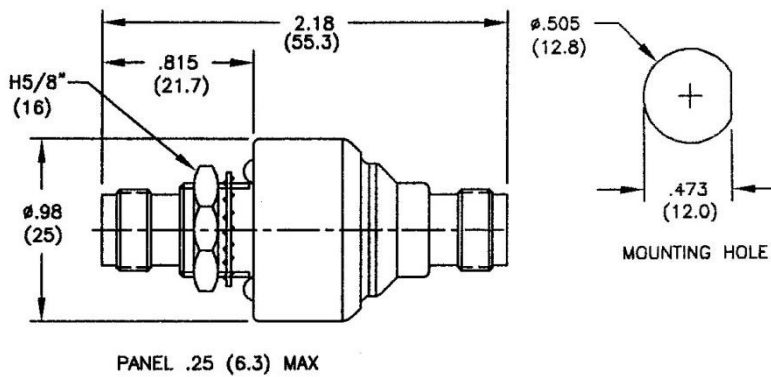


**Package D – Tubular, Bulkhead Mount, no DC**

**Type N (example)**



**TNC (example)**



**Package E – Tubular Bulkhead Mount, no DC, Type N only**

